

CLAIMS

What is claimed is:

1. A method of repairing a part, comprising the steps of:
providing a wrought part having a contact area and an anomaly that renders said part unsuitable;
providing a wrought material having a contact area;
heating said contact area of said material and said contact area of said part; and
pressing said contact area of said material against said contact area of said part;
wherein said material bonds to said part to render said part suitable.
2. The method as recited in claim 1, wherein the heating and pressing steps comprise forge joining.
3. The method as recited in claim 1, wherein said part is not fusion weldable.
4. The method as recited in claim 3, wherein said part is a nickel-based superalloy or a titanium alloy.
5. The method as recited in claim 4, wherein said material is made from the same material as said part.

6. The method as recited in claim 5, wherein said part is a rotating component of a gas turbine engine.
7. A part produced by the method steps of:
providing a wrought part having a contact area;
providing a wrought material having a contact area;
heating said contact area of said wrought material and said contact area of said wrought part; and
pressing said contact area of said material against said contact area of said wrought part;
wherein said material bonds to said wrought part.
8. A method of making a rotating part of a gas turbine engine, comprising the steps of:
providing a rotating part made from a wrought material and having a contact area;
providing a piece of wrought material having a contact area;
heating said contact area of said material and said contact area of said part; and
pressing said contact area of said material against said contact area of said part;
wherein said material bonds to said part.
9. The method as recited in claim 8, wherein the heating and pressing steps comprise forge joining.
10. The method as recited in claim 8, wherein said part has an anomaly thereon and the method further comprises the step of treating said anomaly to form said contact area of said part.

11. The method as recited in claim 10, wherein the treating step comprises machining said anomaly.

12. The method as recited in claim 8, wherein said part is not fusion weldable.

13. The method as recited in claim 12, wherein said part is a nickel-based superalloy or a titanium alloy.

14. The method as recited in claim 13, wherein said piece is made from the same material as said part.

15. A method of repairing a rotating disk or drum rotor of a gas turbine engine, comprising the steps of:

providing a rotating disk or drum rotor made from a wrought material and having an arrangement of lugs and slots, at least one of said lugs or said slots having an anomaly thereon;

treating said anomaly to form a contact area;

providing a piece of wrought material having a contact area;

heating said contact area of said material and said contact area of said component;

pressing said contact area of said material against said contact area of said component so that said material bonds to said component; and

treating said material to provide a desired shape to said disk or drum.

16. The method as recited in claim 15, wherein the heating and pressing steps comprise forge joining.

17. The method as recited in claim 15, wherein the treating steps comprise machining.

18. The method as recited in claim 15, wherein said disk or drum is not fusion weldable.

19. The method as recited in claim 18, wherein said disk or drum is a nickel-based superalloy or a titanium alloy.

20. The method as recited in claim 19, wherein said piece is made from the same material as said disk or drum.